Annual Report

EL 40/2008 Targa

2013/2014

Tamar Gold Ltd – Greatland Pty Ltd - Joint Venture

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Mineral Resources Tasmania
Greatland Pty Ltd

Abstract

Tamar Gold Ltd underwent a change of management in late 2012 and after a review of the ground held a decision was made to only explore areas that were prospective for the Intrusive-related Gold System (IRGS) style of mineralisation. Part of the area covered by EL 40/2008 is adjacent to EL 13/2007 and is regarded as having all the characteristics required to be prospective for IRGS mineralisation. As EL 40/2008 was held by Greatland Pty Ltd a Joint Venture was entered into in early 2013.

During the past year a soil sampling program was completed over the North Lisle East and South Lisle areas. Other work included an assessment and geostatistical review of the soil geochemistry, regional magnetic compilation, a literature review, a compilation of the hard rock gold prospects and a summary of IRGS mineralisation.

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Introduction

Exploration objective

Tamar Gold Ltd underwent a change of management in late 2012 and after a review of the ground held a decision was made to only retain areas that were prospective for the Intrusive-related Gold System (IRGS) style of mineralisation.

Bruce Pertzel was asked to comment on the IRGS style of mineralisation (see Appendix 2). As a consequence of his positive summary and the unrecognised potential within some of the ground held by Tamar Gold the company decided to focus its exploration effort on those areas in North East Tasmania that were prospective for IRGS mineralisation.

Geological setting

The area is dominated by ridges of hornfelsed Mathinna Supergroup sediments surrounding basins which have eroded Lisle Granodiorite on the slopes and floors.

The Mathinna Supergroup (see the MRT revision of the Mathinna Stratigraphy in figure 1 and map in figure 2 below) in the Lisle – Golconda area has now been designated as the Lone Star Siltstone which consists of a sequence of thin bedded siltstones coarsening up to fine grained sandstones (Seymour et al., 2011). They form NNW trending folds with several fold closures and a weak NNW striking cleavage.

Revised stratigraphy for Mathinna Supergroup

	Group	Formation	Member	Age	Brief description	ASUD status
Mathinna Supergroup	Panama Group	Sideling Sandstone		Early Devonian (plant fossils)	Dominantly fine-grained sandstone, some interbedded siltstone	Spelling correction & formalisation of existing unit
		Lone Star Siltstone		Late Silurian (graptolites)	Dominantly thin-bedded siltstone, with interbedded fine-grained sandstone increasing towards top	New formal unit
		Retreat Formation		Silurian?	Interbedded turbiditic medium to very fine grained sandstone and subordinate siltstone-mudstone	New formal unit
		Yarrow Creek Mudstone		Silurian?	Dominantly thin-bedded mudstone, with subordinate cross-laminated siltstone	New formal unit
	Inferred fault contact					
	Tippogoree Group	Turquoise Bluff Slate		Early–Middle Ordovician (graptolites)	Phyllitic dark grey-black slate; recumbent folds and cleavage	Existing formal unit
			Industry Road Member	Early–Middle Ordovician?	Interbedded phyllitic slate and foliated very fine-grained sandstone; ridge-forming; recumbent folds and cleavage	New formal unit
		Stony Head Sandstone		Early Ordovician?	Graded thick-bedded fine-grained turbiditic sandstone with minor interbedded pelite; large-scale recumbent folds and cleavage	Existing formal unit

Figure 1. Stratigraphy Mathinna Supergroup (from Seymour et al, 2011).

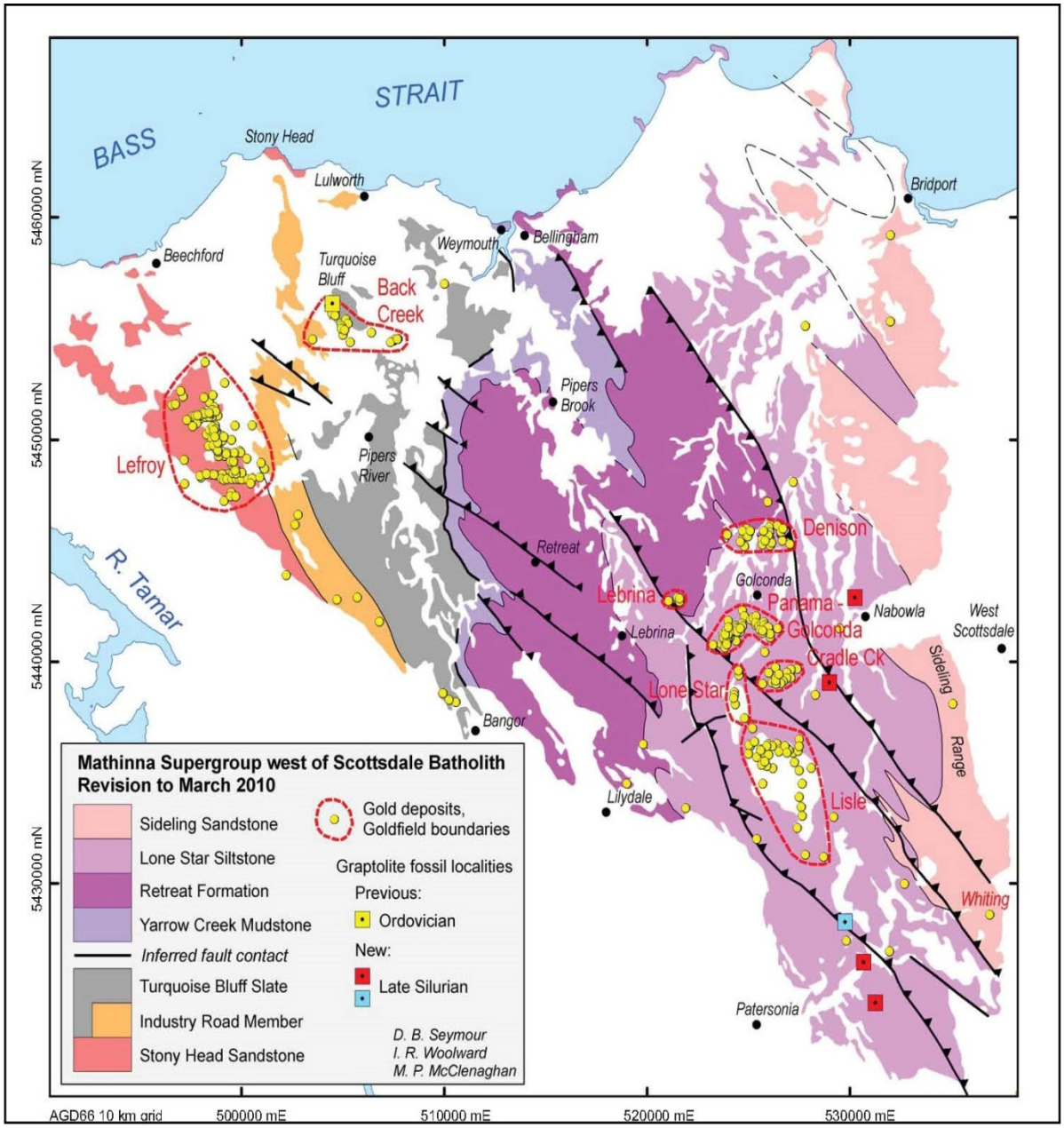


Figure 2. Mathinna Supergroup with Lisle, Cradle Creek, Golconda-Panama Goldfields from Seymour et al, 2011.

The Lisle Granodiorite is deeply weathered and rarely outcrops. These intrusives are complex and heterogeneous with numerous inclusions of hornfelsed Mathinna Supergroup and dark diorite. Textures vary from equigranular, feldspar-biotite-quartz granodiorites to feldspar-hornblende-biotite porphyritic diorites. Intrusions occur as dykes and small cupolas or porphyritic apophyses.

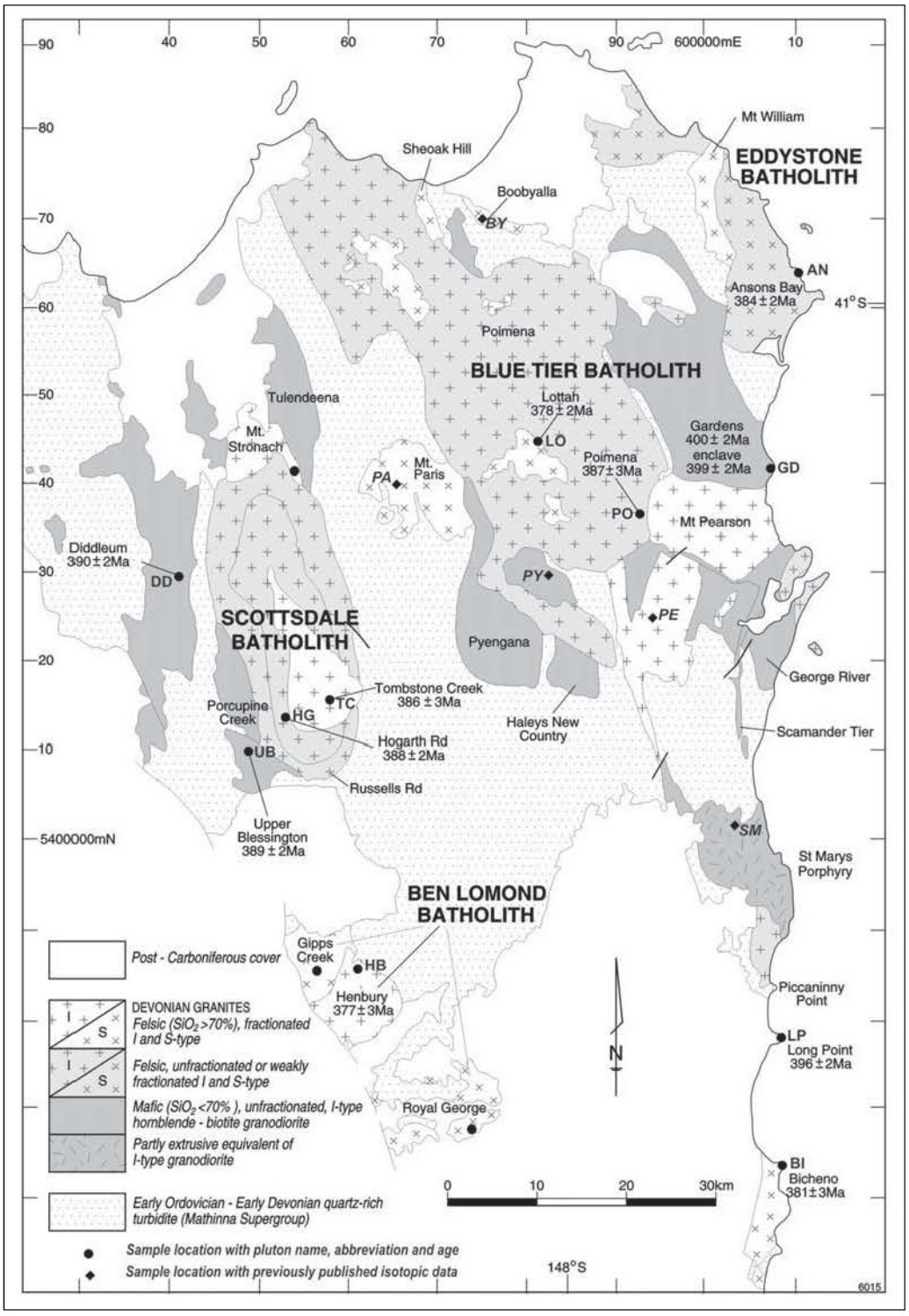


Figure 3. North East Tasmania showing Devonian granite batholiths and plutons from Black et al., 2005.

Roach (1992) analysed 16 samples of the various granodiorites from Lisle, Golconda, Panama and the western margin of the Scottsdale Batholith known as the Diddleum Pluton (see figure 4 below). There is a clear distinction between the rocks of the Scottsdale Batholith and the granodiorite from the Lisle area. In terms

of Rb and Sr the Lisle granodiorites are the least fractionated of the Tasmanian Devonian Granitoids (see figure 6).

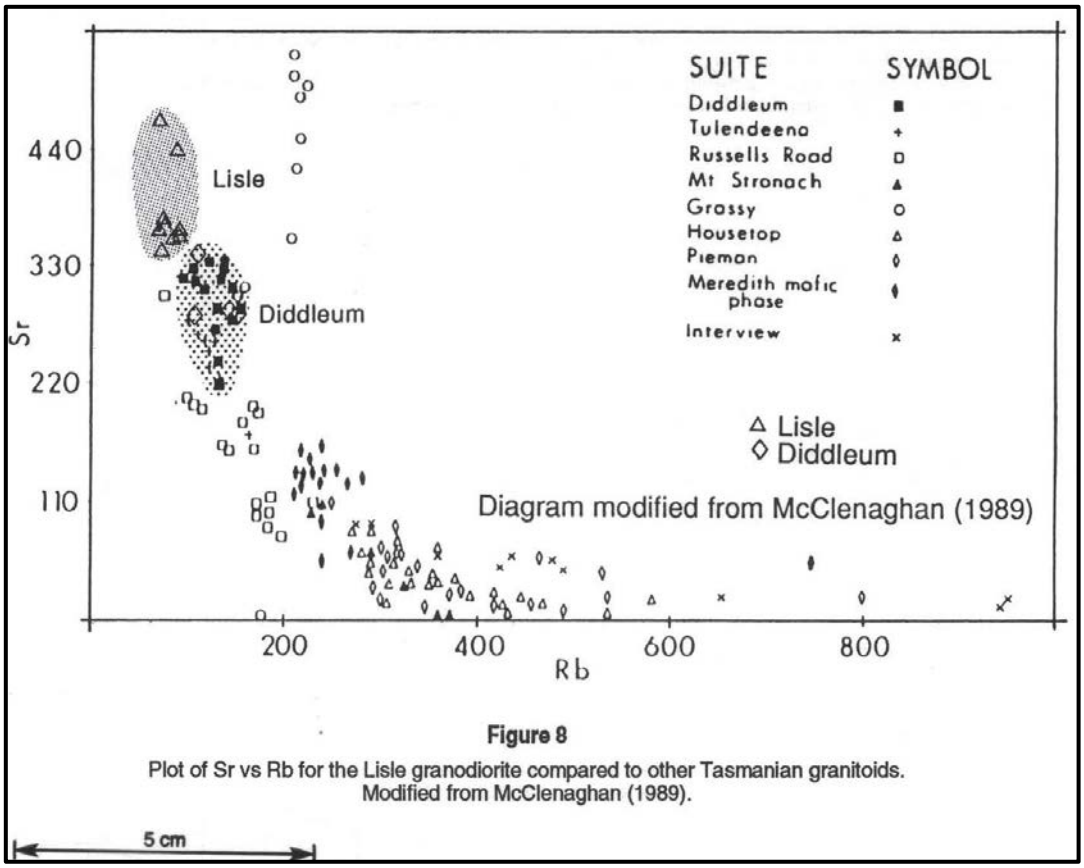


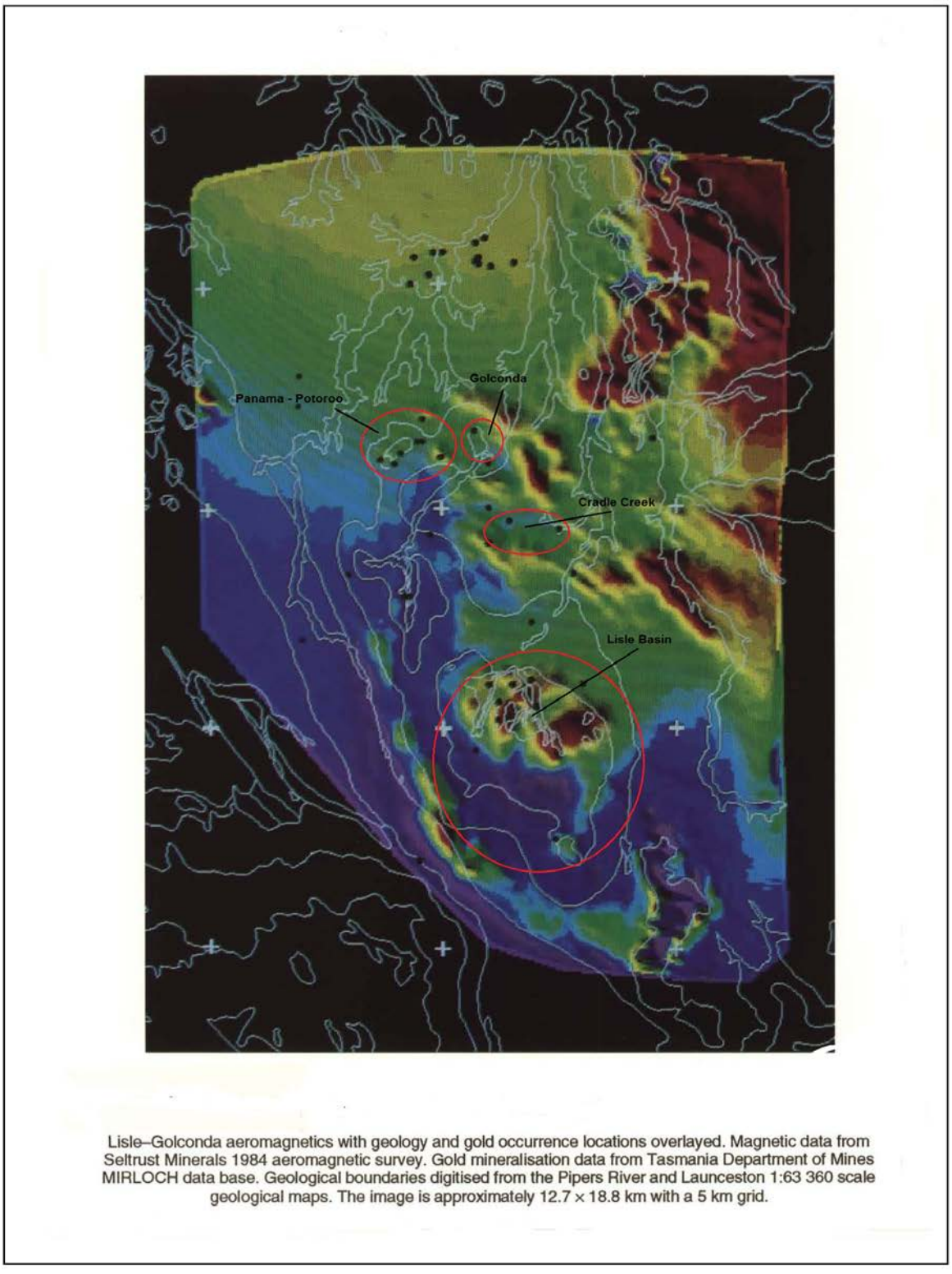
Figure 4. Sr vs Rb Lisle Granodiorite and other Tasmanian granitoids (from Roach, 1992).

Callaghan (2003) noted that there is a marked variability of the magnetic susceptibility of the granodiorites. This is probably a reflection of varying geochemistry between the complex intrusives but may also represent areas of magnetite destruction associated with hydrothermal alteration.

In Roach (1992) an image of the Seltrust Minerals (Storer, 1985) aeromagnetics (see figure 5 below) shows the high-frequency negative magnetic anomalies that correspond with the Tertiary basalt flows. The NW-trending highs occur over the Mathinna Supergroup and are parallel to the regional strike. These linear highs are truncated along a NE structural feature.

Roach (1992) discusses the irregular magnetic anomalies associated with the Lisle Granodiorite as seen in the northern part of the Lisle Basin. Both highly magnetic and effectively non-magnetic samples were obtained from this location with the two rock types appearing identical in hand specimen. A zone of magnetic anomalies resulting from the magnetic granodiorite stretches north from the Lisle valley to

Panama. A small anomaly is associated with the outcropping granodiorite at Panama but no anomaly is directly associated with the intrusion at Golconda. Roach (1992) notes that there are two different magnetic types of granodiorite within the Lisle-Golconda area and that the differences are not simply the result of either weathering or alteration.



Lisle–Golconda aeromagnetics with geology and gold occurrence locations overlayed. Magnetic data from Seltrust Minerals 1984 aeromagnetic survey. Gold mineralisation data from Tasmania Department of Mines MIRLOCH data base. Geological boundaries digitised from the Pipers River and Launceston 1:63 360 scale geological maps. The image is approximately 12.7 × 18.8 km with a 5 km grid.

Figure 5. Magnetic image from Roach (1992).

In Bulletin 70 Roach (1992) noted that the Lisle - Golconda goldfields are unusual in North East Tasmania in that in excess of 95% of all the gold recovered comes from alluvial workings. It is estimated that the Lisle field produced 250,000 oz. In total it is estimated that 300,000 oz was produced from all the goldfields with no obvious source for the alluvial gold.

Twelvetrees (1909) and Reid (1926) both commented on the morphology of the gold from Lisle and Roach, 1992, noted;

- That it was extremely fine in grain size, generally less than 0.4 mm in diameter. Nuggets were rare.
- That it was rarely found with vein quartz attached.
- That it was generally of very high fineness.
- Gold concentrations were highest in wash material immediately overlying the weathered granodiorite surface.
- Gold was often concentrated within sediments with either a high organic carbon content or with wash material stained with manganese oxides.

Tenement information

Tenement number:	EL 40/2008
Tenement name:	Targa
Tenement location:	North East Tasmania
Tenement granted:	12/01/2009
Reporting period:	12/01/2013 to 12/01/2014
Tenement Holder:	Greatland Pty Ltd - Tamar Gold Ltd Joint Venture
Tenement Area:	72 sq km

Location

EL 40/2008 is located south of the Lilydale/Scottsdale road approximately 20km west of Scottsdale in North East Tasmania.

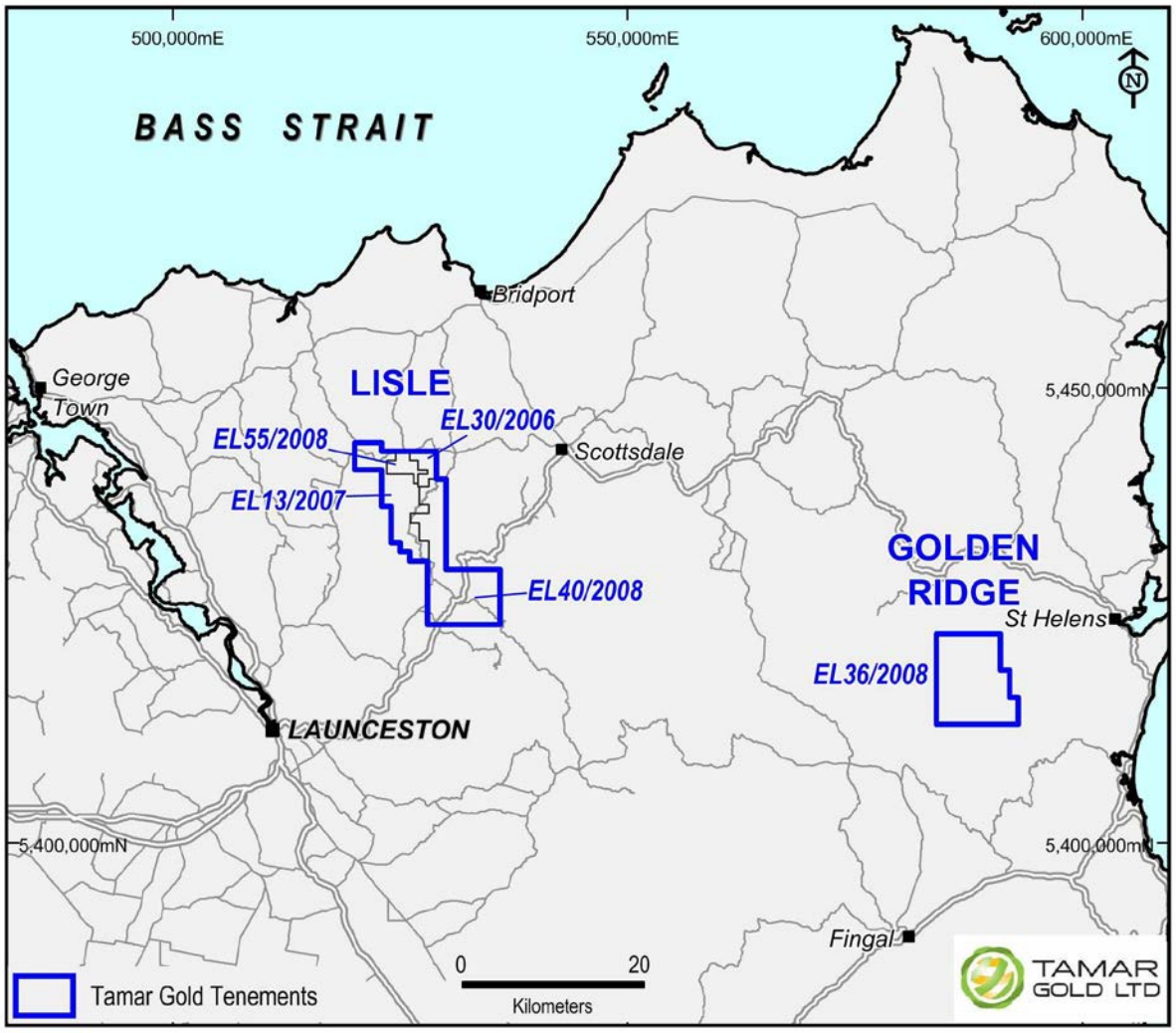


Figure 6. Tamar Gold Ltd tenements in North East Tasmania.

Tenure

EL 40/2008 is held by Greatland Pty Ltd in Joint Venture with Tamar Gold Ltd.

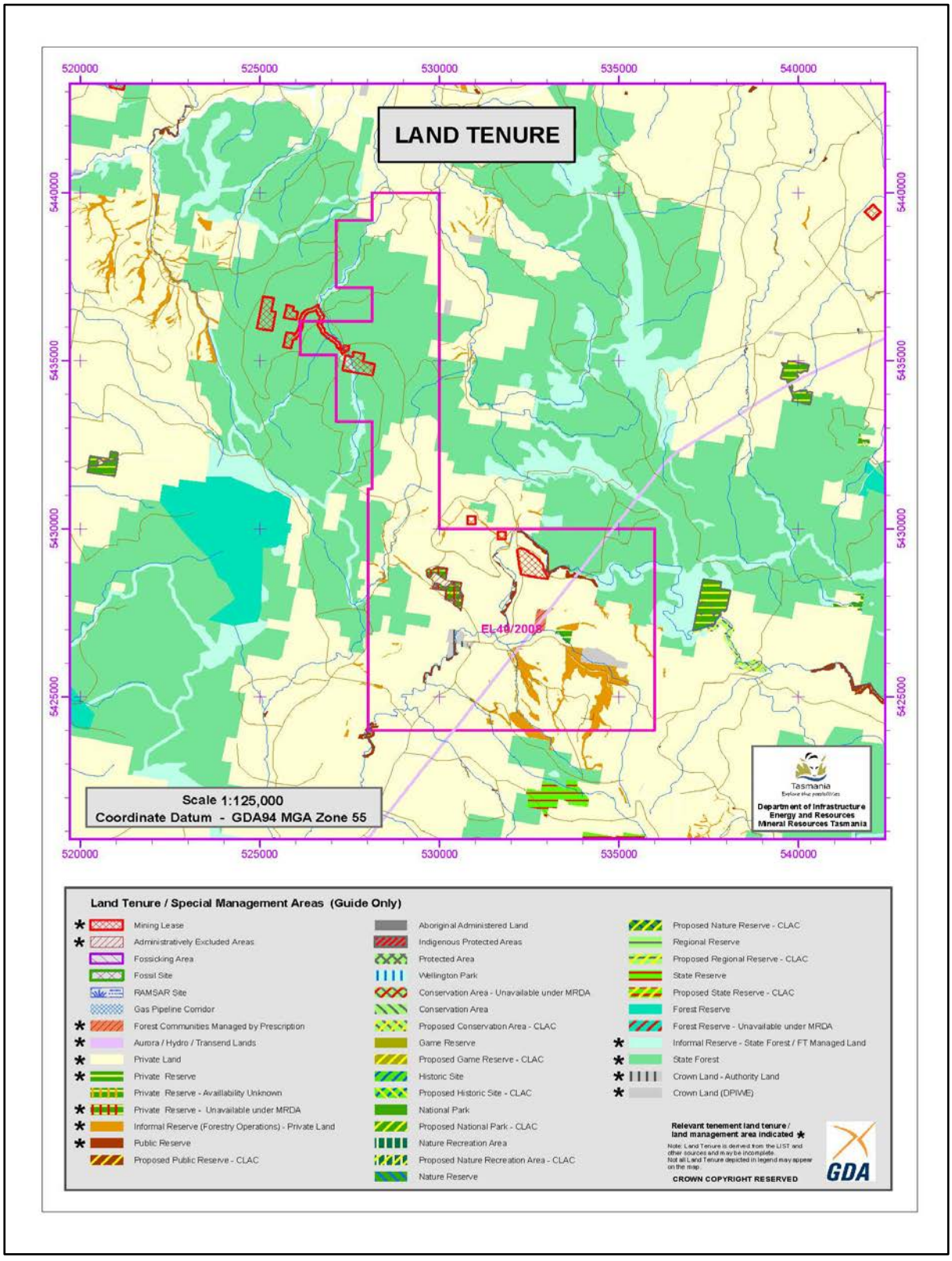


Figure 7. Land Tenure (from MRT).

The land tenure map from MRT shows Private Property and State Forest with Informal Reserves over the remainder of the area. The State Forest is a mixture of pine and eucalypt plantations and regrowth native forest.

Access is via a network of all weather gravel forestry roads and exploration vehicle tracks, which all connect to the Lilydale Road and from there to Launceston, some 40 km by road to the southwest and to Scottsdale, 20 km to east.

Review of previous work

(see literature review section below and Appendix 1 for more information)

In the modern era from 1992 to 2007 various incarnations of MacMin NL (Tasmine Pty Ltd, TasEx Resources Ltd, TasGold Ltd and Frontier Resources Ltd) held EL 2/92 which covered the larger Lisle-Golconda area. Regional soil sampling, structural interpretation, trenching, percussion and diamond drilling were conducted during that period.

Greatland Ltd has held the ground since 2009 and in 2011 selected four drilling targets in areas of gold plant ash anomalies found by Bill Baker (see Baker, 1978) in an MRT survey, and areas of postulated alteration reflected in low magnetic zones in the granodiorite.

Askins (2012) reports that the open hole drilling proved to be unsatisfactory. A lack of depth penetration meant that basement was intercepted in only one target area. This completely weathered basement granitoid carried only around 4ppb gold. Paleochannel alluvium was intersected in all target areas. Gold in alluvium was generally less than 10ppb, but locally up to 76ppb.

A biogeochemical survey was conducted at one of the targets to determine if Baker's anomaly could be reproduced. No gold anomalies were generated, suggesting that Baker's results were faulty.

Biogeochemical sampling at Faulkners Creek, north of the main Lisle mineralised area, defined a strong rare earth anomaly. This was followed up in 2012 but failed to locate the source of the anomaly.

Exploration completed during the report period

Introduction

The work that Tamar Gold has completed since February 2013 includes:

- A literature review (see Appendix 1).
- A review of IRGS (see Appendix 2).
- Compilation of mineral deposits from the MRT database (see Appendix 3).
- Compilation of the prospect scale magnetics and topography by Phil Muir.
- Soil surveys over the North Lisle East and South Lisle areas (see Appendix 4).
- Consultant report assessing the soil sampling program (see Appendix 5).

Literature review

A literature review of the Lisle – Golconda area was undertaken in March 2013 (see Appendix 1).

Review of IRGS

The summary of IRGS deposits by Bruce Pertzel is presented in Appendix 2. The following observations on the features of IRGS have confirmed the view held by Tamar Gold that the Panama – Golconda, Cradle Creek and Lisle Goldfields are prospective for this style of mineralisation:

- Tectonic Setting. Preferred host strata include relatively deep water, reducing sediments and metasediments. Intrusions emplaced into old continent margins behind active plate margins.
- Metal Zonations. Temperature dependent and concentric zones up to a few kilometres out from the pluton margin or just beyond the thermal aureole. Pluton - proximal Au has Bi, Te association; W associated aureole mineralisation will have As or Sb association; distal mineralisation may be related to Ag-Pb-Zn.
- Diversity of Deposits. Several different styles possible; intrusion and/or country rock hosted skarns, replacements, disseminations, stockworks and veins: gold mineralisation characterised by wide range of grades; large tonnages present have a range of 0.8 to 1.5 g/t Au (e.g. Fort Knox).
- Sheeted Veins. This is the most distinctive style in reduced IRGS type; sheeted arrays of parallel, low-sulphide, single-stage quartz veins over 10s to 100s of metres preferentially situated in the pluton's cupola.
- Pluton Features. Indicative of hydrothermal fluid generation; characteristic textures – porphyritic, presence of aplite and or pegmatite dykes, greisen alteration and zonation features.
- Redox State. Felsic, ilmenite-series plutons; no magnetite therefore low magnetic susceptibility and low aeromagnetic response; ferric:ferrous ratios less than 0.3.
- Timing. Mineralisation and associated causative pluton are coeval (events are within 2 million years).

Lisle IRGS Exploration Project Deposit Summary

The Mineral Deposit summary was completed in March 2013 and is presented in Appendix 3. The hard rock prospects were used as a vector to mineralisation and the two prospects in this licence were targeted using this technique.

The information used in this summary came from the MRT Mineral Deposit data base. The notes came from Geological Survey Bulletin 37 by McIntosh Reid (1926). The observations he made at the time are likely to be the most accurate record of the mines and prospects in the Lisle – Golconda area.

The summary is intended for field use as a guide about the hard rock (and some alluvial) prospects and where they are in each goldfield.

Regional geology, magnetics and topography

The compilation of the 1:25 000 geology, regional magnetics and topography is presented below.

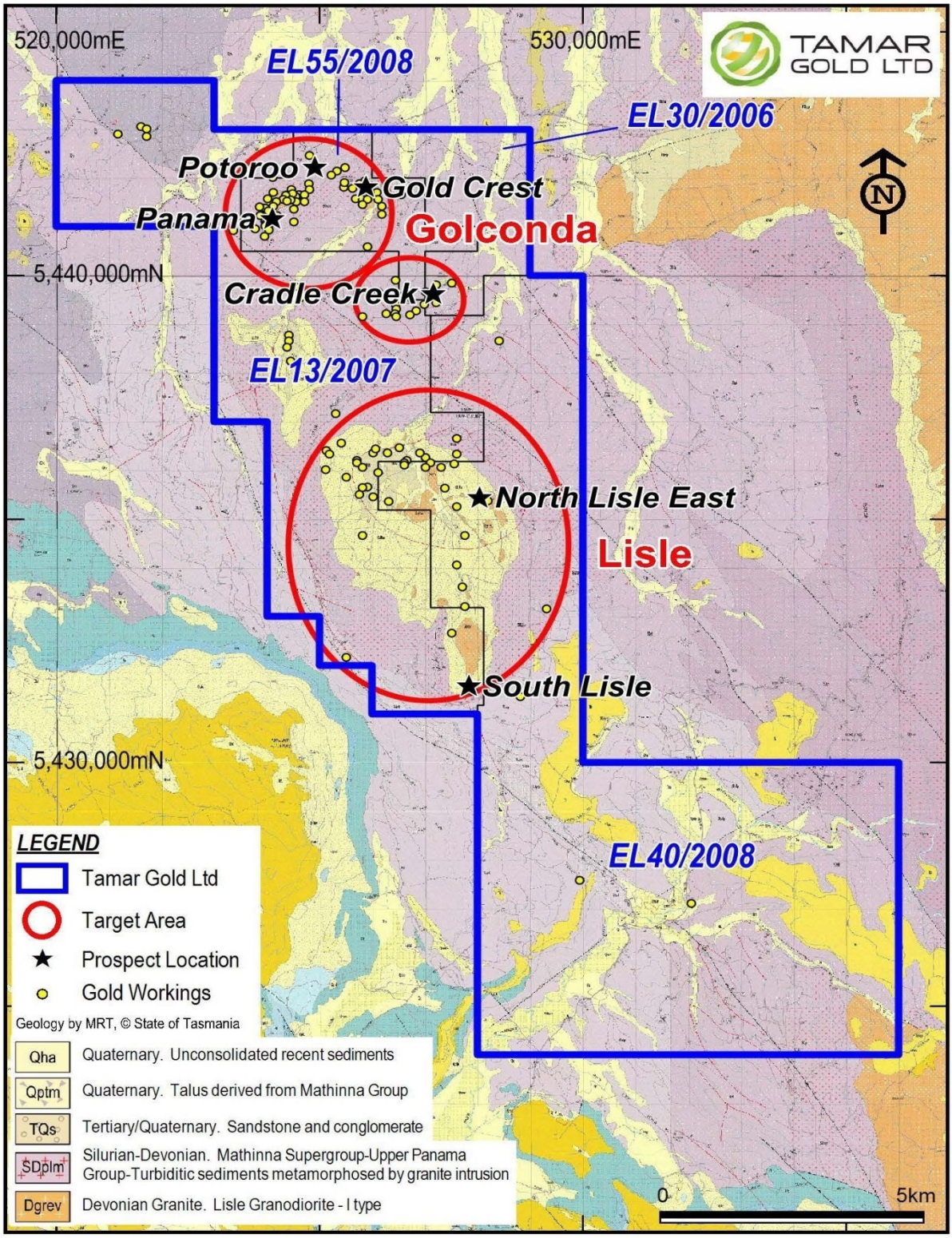


Figure 8. 1:25 000 geology from MRT.

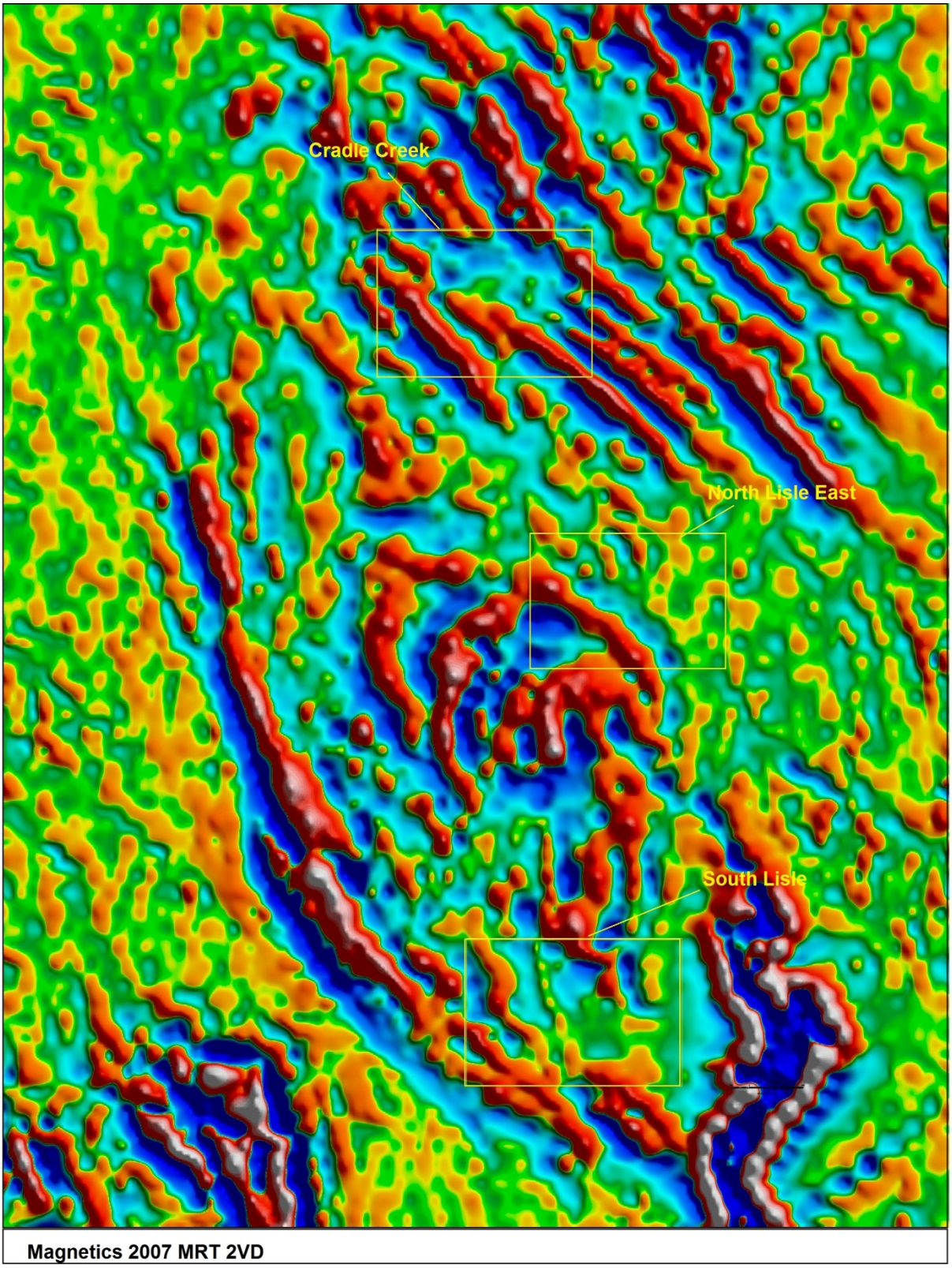


Figure 9. Regional Magnetics – MRT 2007 data compiled by Phil Muir.

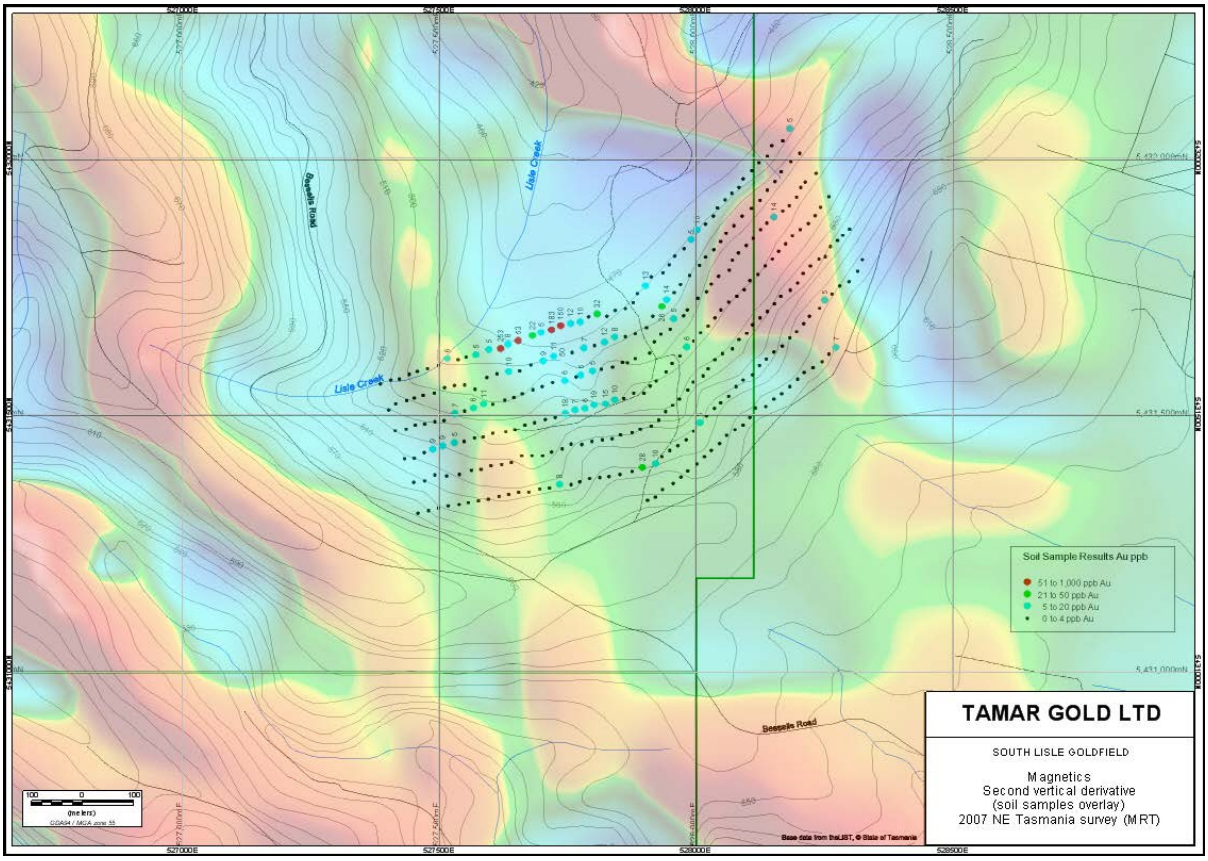


Figure 10. Magnetics over South Lisle.

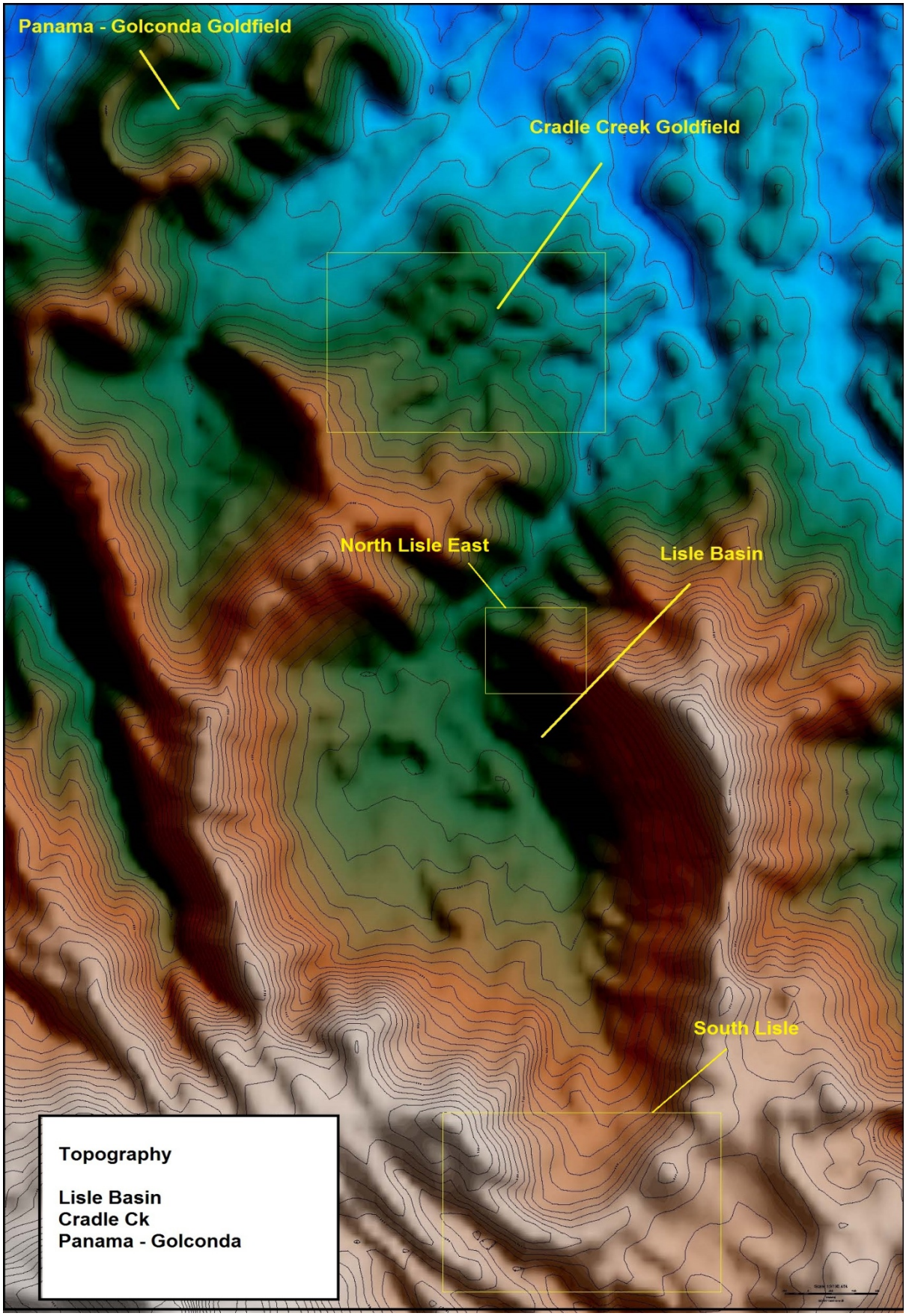


Figure 11. Topography for Lisle area.

Soil geochemistry

Tamar Gold Ltd completed a soil sampling survey over the North Lisle East and South Lisle areas (see Appendix 4) which crossed the boundary between EL 13/2007 held by Tamar Gold and EL 40/2008. 191 samples were taken at North Lisle East on EL 40/2008 and 70 at South Lisle on EL 40/2008.

The samples were excavated with a manual trenching tool, organics were scraped away, and from a pad of 30cm x 30cm, at 20cm depth, a combined B/C horizon sample was taken to produce 1-2kg of soil. The entire sample was sent to ALS (Townsville laboratory) where they were dried, pulped and split. Gold was assayed by Fire Assay/AAS (50g charge) at 5ppb level of detection (method AA-24). As, Cu, Pb, and Zn splits were assayed by aqua regia digest/ICP - AES finish (ME-ICP 41) and Bi, Mo, Sb, Te by the same digest but an ICP - MS finish (ME-MS 41).

Tim Summons of Mining One (see Appendix 5) was asked to assess the soil surveys and to do a geostatistical analysis of them.

Sample localities are presented below:

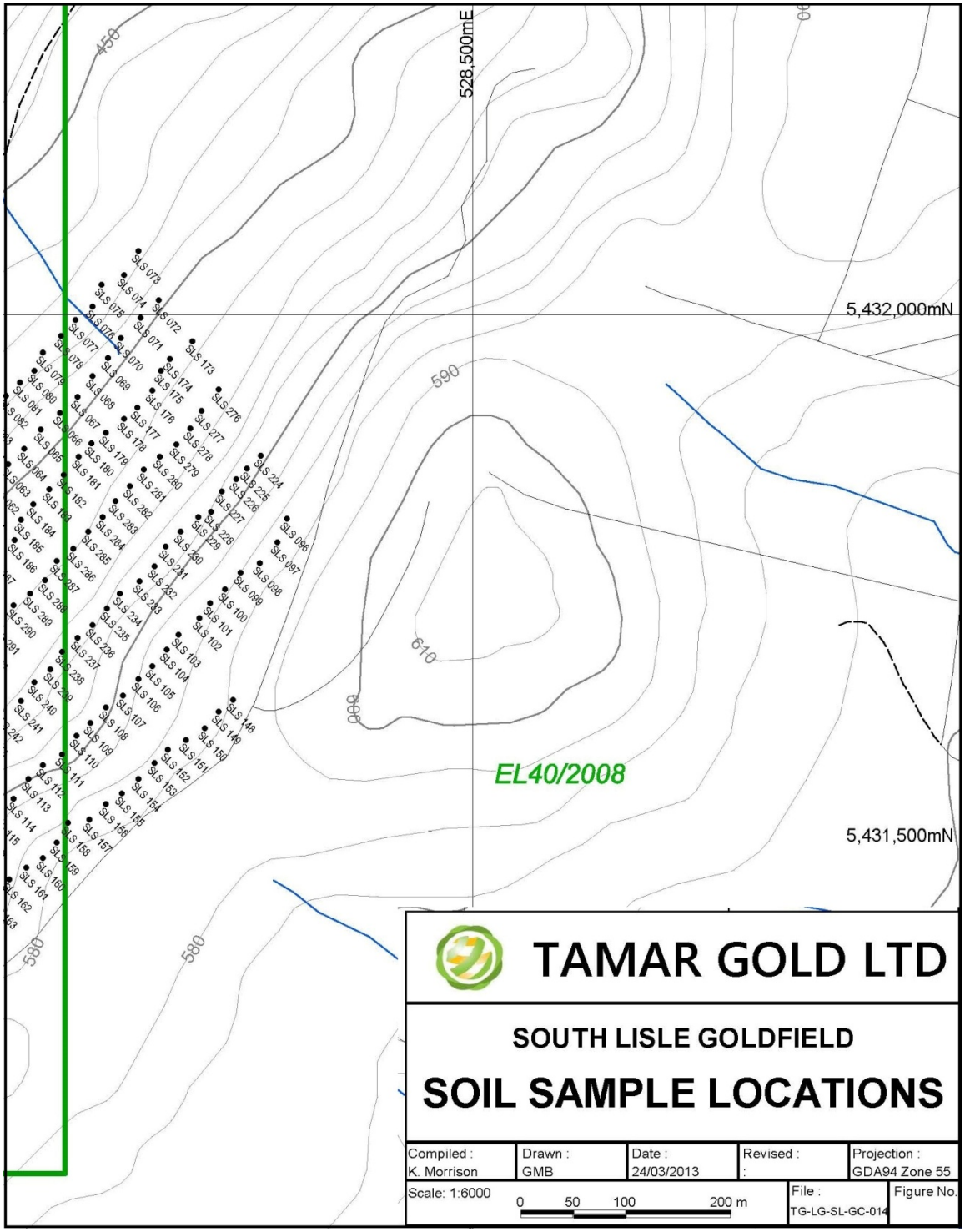


Figure 12. South Lisle soil sample locations.

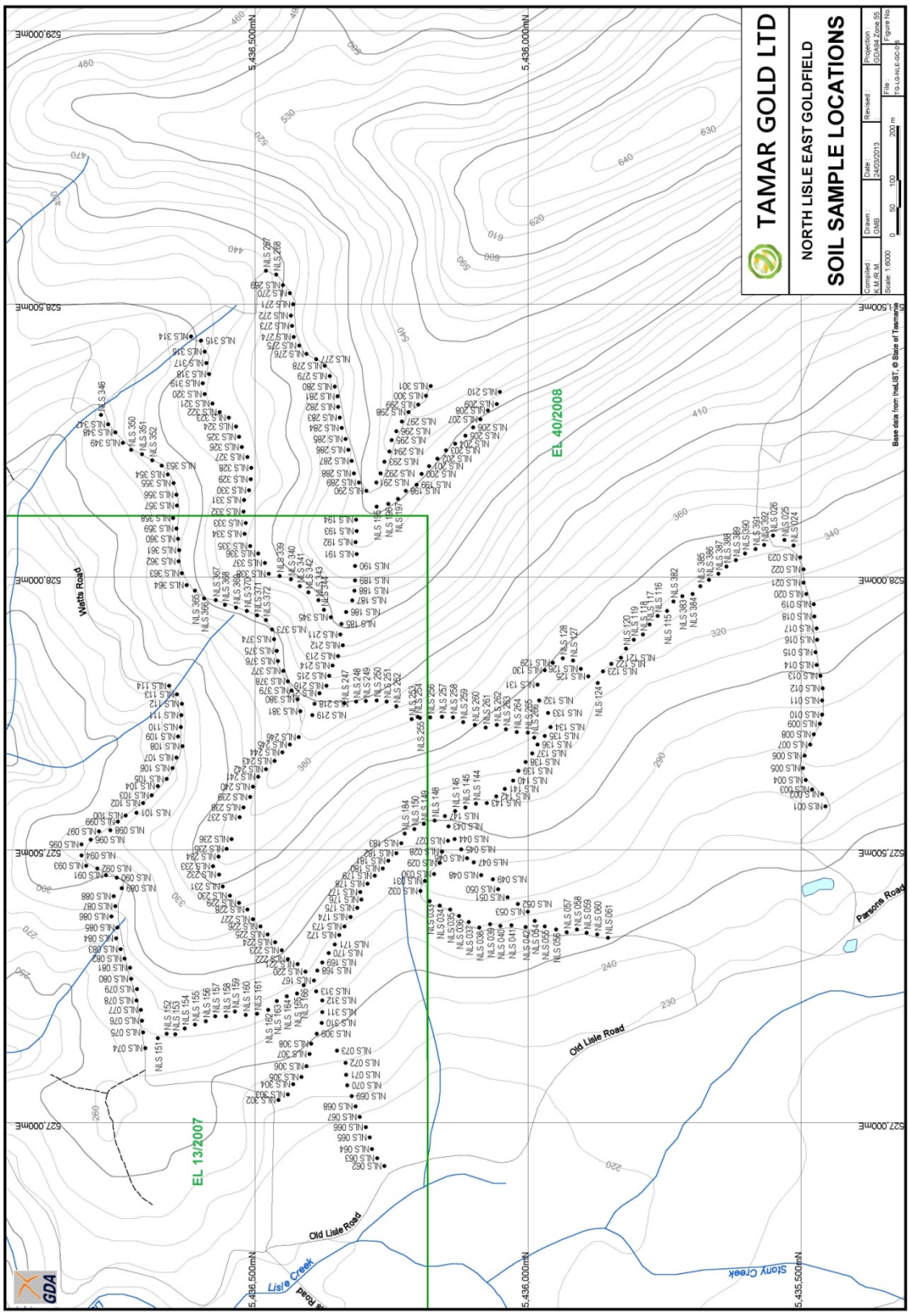


Figure 13. North Lisle East soil sample locations.

Plots for gold and are presented below:

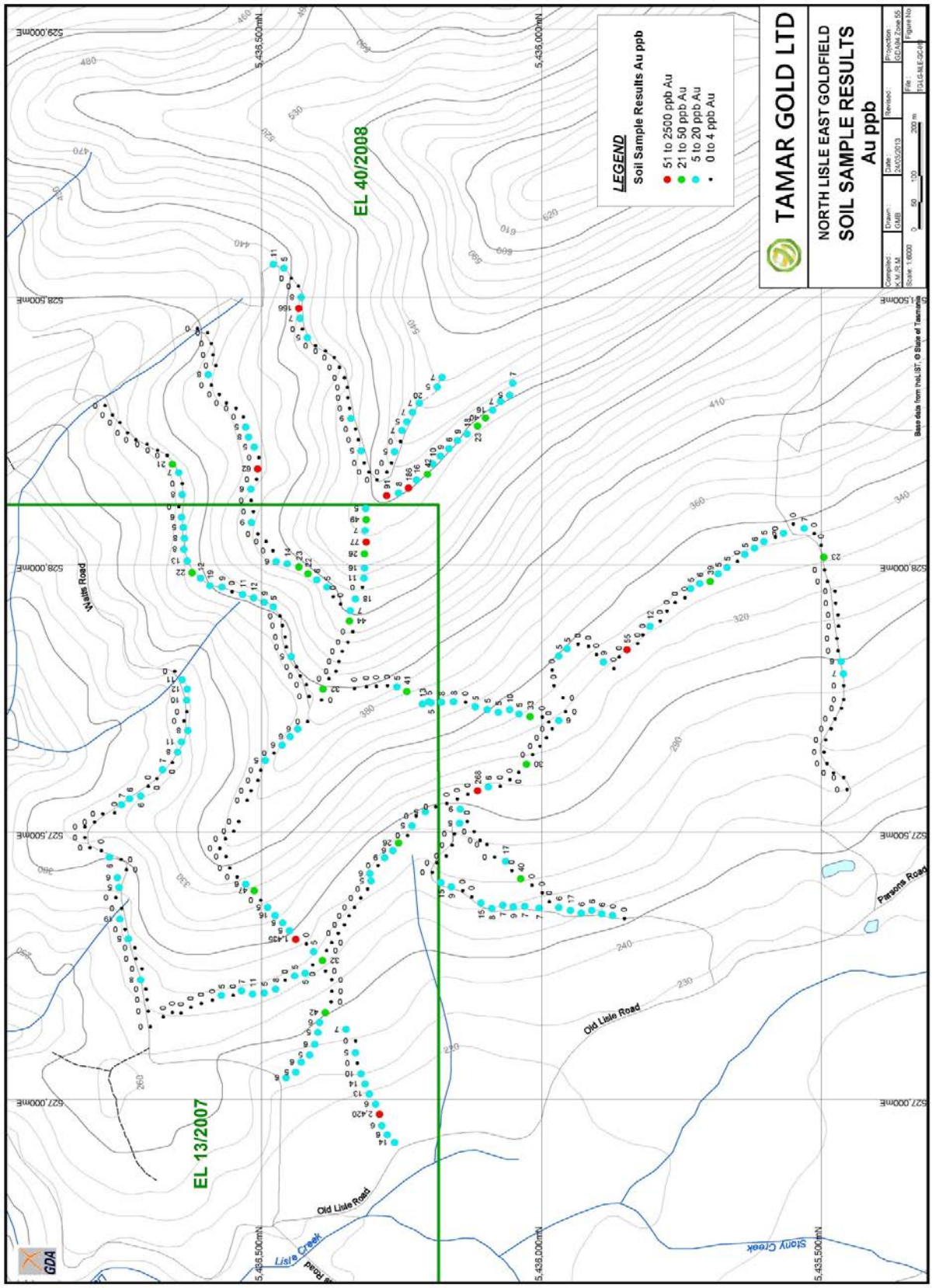


Figure 14. Au plots from North Lisle East soil sampling.

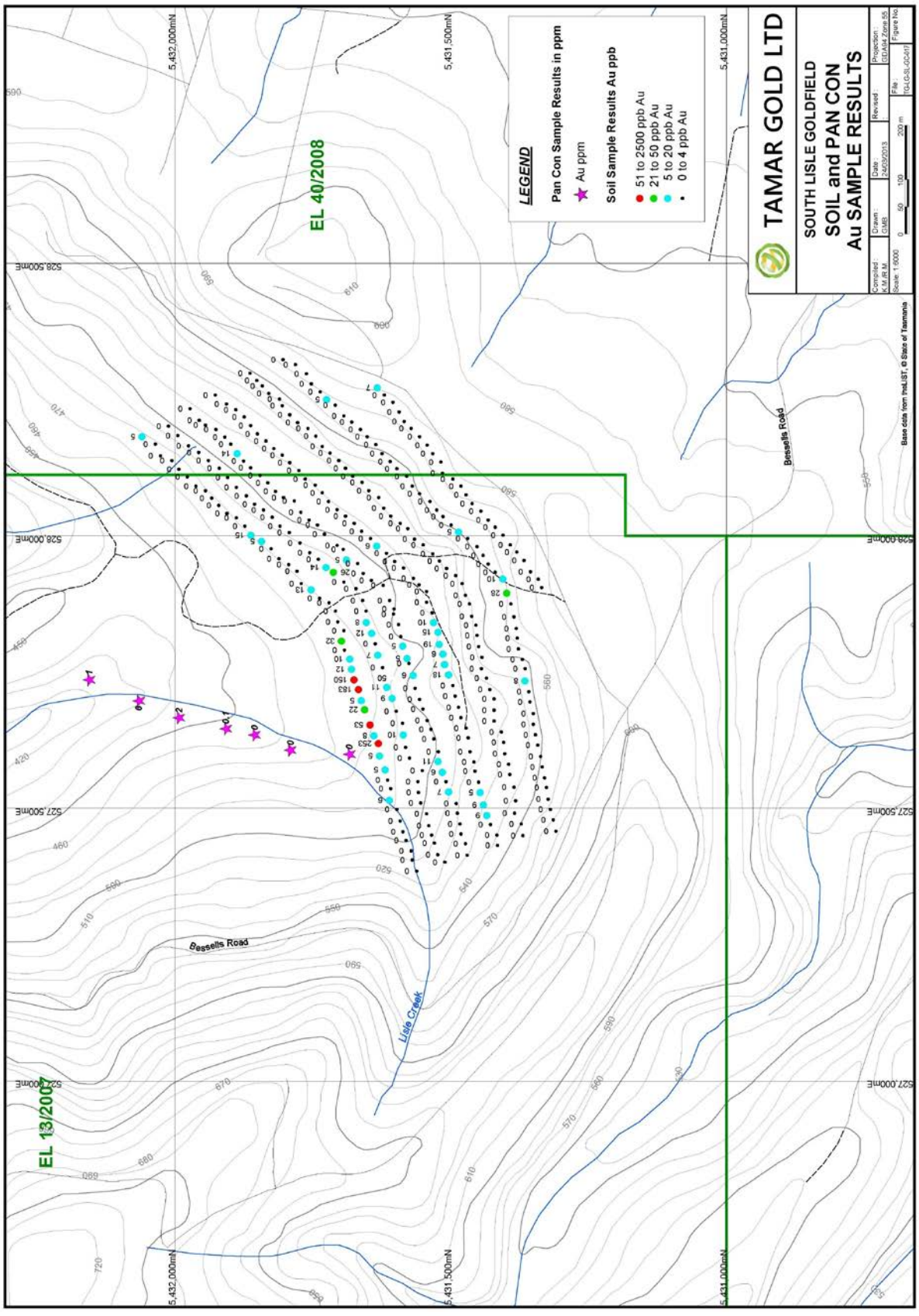


Figure 15. Au plots from South Lisle soil sampling.

Discussion of results

Literature review

The recommendations as presented in the literature review (see Appendix 1) follow:

Lisle Basin

The modern era of exploration resulted in one drill hole on an arsenic anomaly in the south of the basin, two drill holes by MRT on the eastern side and a number of stream related sampling programs. Considering the size of the area and the relatively rich alluvial fields the hard rock potential of this large basin remains under explored for IRGS style mineralisation. Magnetic and non magnetic Lisle granodiorite are recognised by Roach.

1. It is recommended that a search of the MRT database for hard rock workings around the rim of the basin be undertaken.

2. Soil sample lines should then be run across the slopes on the contour initially focusing on the known hard rock workings but this should be extended to cover the rim in its entirety.

3. The regional magnetics should be compiled to assist in the recognition of the different phases of the Lisle Grandiorite and to attempt to relate that to the mineralisation.

Intrusion-related Gold Systems.

The summary of the IRGS style of mineralisation (see Appendix 3) concludes that:

- The recognition of IRGS deposits in the Tasman terrane of Eastern Australia is of great significance for mineral explorers holding tenements in the States of Queensland, New South Wales, Victoria and Tasmania.

- Sovereign Gold Company Limited, an ASX-listed junior explorer claims a new IRGS discovery at Martins Shaft, a principal prospect in the Uralla Goldfield, SW of Armadale in the New England sector of the Lachlan Fold Belt. (Company announcement to the ASX, October, 2012).

- The recognition of the large Cadia - Ridgeway Gold (Copper) Deposits in Central NSW and the Wonga gold deposit at Stawell (a site mined continuously for 29 years) as having IRGS affinities highlights the potential for similar deposits to be found using judicious application of the IRGS features to contemporary exploration programs. Potential for new gold deposit discoveries in the Palaeozoic miogeosynclinal sedimentary sequences of the

Tasman Geosyncline (on both sides of the Tasman) – a province known for its orogenic style turbidite-hosted gold deposits such as Bendigo, Ballarat and McCrae's – is further enhanced by the recognition of IRGS deposits in this terrane.

Regional magnetics and topography

The regional magnetics show the strong NW lineation of the Lone Star Siltstone with closures suggesting large scale folding. The semi circular pattern on the hornfelsed rim of the Lisle Basin is relatively subdued compared to the strong pattern seen in the granodiorite. Within the Lisle Basin different phases of the granodiorite are magnetised. Roach (1992) noted that there are two different magnetic types of granodiorite within the Lisle-Golconda area and that the differences are not simply the result of either weathering or alteration.

The magnetics over South Lisle are subdued but do show a NNW striking dyke like feature

The regional topography displays the striking depressions formed by the granodiorite at Panama, Potoroo, Gold Crest and the Lisle Basin.

Soil geochemistry

Tim Summons (see Appendix 5) noted that the Tertiary/Quaternary cover materials of slope, alluvial and lacustrine deposits would have the greatest impact on sample reliability.

North Lisle East

This is an area above the main Lisle alluvial working with Mathinna Supergroup roof rocks and numerous small workings overlying granitic basement. There has been no modern exploration here. Tamar Gold has completed a soil geochemical survey and the entire area shows low level gold in soil, with no evidence of closure in the 4 sq km area sampled (see figure 16 above). This result implies that the entire eastern and western margin of the Lisle Basin is potentially prospective and that a regional scale exploration program is required to define discrete drill targets.

Tim Summons (see Appendix 5) noted that the highest gold and molybdenum sub populations occur with mica and is interpreted as being granite hosted.

South Lisle

The South Lisle area had historic workings in Mathinna Supergroup sandstones at the southern end of the Lisle Basin, upslope from the main drainage line to the alluvial gold field (see figure 17 above). Tamar Gold geochemical sampling defined an anomalous area in the lower part of the grid. Further field investigations are

required to map the contacts between roof rocks, granitic basement and alluvial gravels in the area of this soil anomaly.

Conclusions

The literature review recognised the potential of the area for IRGS style mineralisation and the summary by Bruce Pertzel provided encouragement to proceed with an exploration program. The review of historic hard rock deposits identified two areas for a detailed soil geochemistry sampling program.

The proposed exploration program for the next two years is as follows:

North Lisle East

- The soil geochemical survey shows the entire area has low level gold in soil, with no evidence of closure in the 4 sq km area sampled.
- This result implies that the entire eastern margin of the Lisle Basin is potentially prospective and that a regional scale exploration program is required to define discrete drill targets.

South Lisle

- Soil geochemical sampling defined an anomalous area in the lower part of the grid on EL 13/2007.
- Further field investigations are required to map the contacts between roof rocks, granitic basement and alluvial gravels in the area of this soil anomaly.

2013/2014 program for the eastern side of the Lisle basin.

- Soil geochemistry and helimag around the eastern rim of the Lisle Basin.
- Detailed mapping of contact zone, alluvials and slope deposits.

Total $200 000

If this work is successful then follow up sampling and drilling in 2014/2015 will be budgeted at $400 000.

Budget summary:

2013/2014 = $200 000
2014/2015 = $400 000

Environment

The geochemical lines did not require any chain saw cutting and the soil sample sites were excavated to approximately 20cm and back filled on completion and do not require any further rehabilitation.

Expenditure

Total expenditure to September 2013 is $247 275. Estimated expenditure for the licence year is $76 551.

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